

# REDSTONE GATEWAY

# PACKAGE 1B-5 - GRAVITY SANITARY SEWER

FOR THE

CITY OF HUNTSVILLE HUNTSVILLE, ALABAMA

## ISSUE FOR CONSTRUCTION



LBYD, INC. PROJECT NO. 302-10-002A CITY OF HUNTSVILLE PROJECT NO. 65-08-SM05

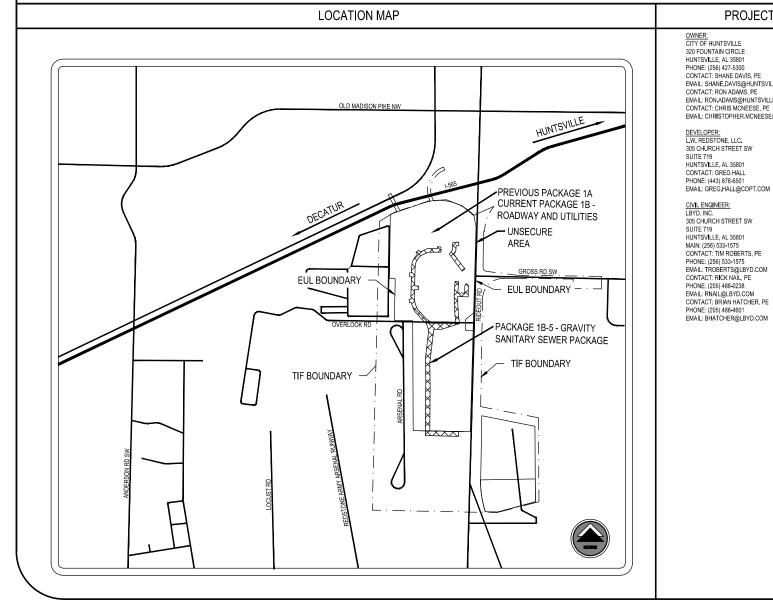
MARCH 14, 2011

DRAWING INDEX

PROJECT GENERAL NOTES OVERALL EXISTING CONDITIONS PLAN PACKAGE 1A "FINAL DESIGN CONDITIONS" PLAN

EXISTING CONDITIONS PLAN DEMOLITION PLAN

NOTE: FOR PLOTTING PURPOSES GRAY SHADES ARE PRESENT 36" X 48" FULL SIZE SHEETS



PROJECT TEAM OWNER:
CITY OF HINTSVILLE
320 FOUNTAIN CIRCLE
HUNTSVILLE, AL 35801
PHONE: (256) 427-5300.
CONTACT: SHANE DAVIS, PE
EMAIL: SHANE DAVIS, PE
EMAIL: SHANE DAVIS, PE
EMAIL: GOV CONTACT: RON ADAMS, PE
EMAIL: RONADAMS@HUNTSVILLEAL.GOV
CONTACT: CHRIS MONESES, PE
EMAIL: CHRISTOPHEER MONESES EMRIL BRUNNESPRAFFELDOMNESON
GEOTECHNICAL ENGINEER:
BUILDING AND EARTH SCIENCES
2607 LEEMAN FERRY ROAD,
SUITE 5
HUNTSVILLE, AL 35801
MAIN: (256) 713-0056
CONTACT: DON BROWN, PE
PHONE: (205) 836-6800
EMAIL: DBROWN@BUILDINGANDEARTH.COM DEVELOPER:
L.W. REDSTONE, LLC.
305 CHURCH STREET SW
SUITE 719
HUNTSVILLE, AL 35801 CONTACT: GREG HALL PHONE: (443) 878-6501 EMAIL: GREG HALL@COPT.COM

MAIN: (256) 533-1575 CONTACT: TIM ROBERTS, PE

BOSBIN ENGINEERING AND SURVETING, III 924 MERIDIAN STREET N HUNTSVILLE, AL 35801 MAIN: (256) 533-1099 CONTACT: CAREY BUSBIN, PE/PLS EMAIL: CAREYBUSBIN@BELLSOUTH.NET REDSTONE GARRISON: DIRECTORATE OF PUBLIC WORKS UNICE UNATE OF PUBLIC WORKS
4488 MARTIN ROAD
REDSTONE ARSENAL, AL 35898
CONTACT: CRAIG NORTHRIDGE
PHONE: (256) 955-8504
EMAIL: CRAIG.NORTHRIDGE@US.ARMY.MIL

DEMOLITION PLAN EXISTING EROSION CONTROL PLAN (FOR REFERENCE ONLY) C4.0 EROSION CONTROL PLAN - PACKAGE 1B-5 MODIFICATIONS EROSION CONTROL PLAN - PACKAGE 1B-5 MODIFICATIONS OVERALL UTILITY PLAN C5.1A UTILITY PLAN UTILITY PLAN C5.1C UTILITY PLAN UTILITY PLAN C5.2 UTILITY PLAN SANITARY SEWER PLAN AND PROFILES - LINE A (STA 0+00 TO STA 19+00) C6.3 SANITARY SEWER PLAN AND PROFILES - LINE B (STA 0+00 TO STA 11+55.17) C6.5 SANITARY SEWER PLAN AND PROFILES - LINE C (STA 0+00 TO STA 17+00) SANITARY SEWER PLAN AND PROFILES - LINE C (STA 17+00 TO STA 35+23.02) SANITARY SEWER PLAN AND PROFILES - LINE D (STA 0+00 TO STA 5+95.28) SANITARY SEWER PLAN AND PROFILES - LINES E, F, G, AND H C7.0 CIVIL DETAILS C7.1 CIVIL DETAILS C8.0 SURVEY









1. LBYD, INC. SHALL NOT HAVE AUTHORITY OVER THE SITE CONTRACTOR'S WORK OR RESPONSIBILITIES. LBYD IS NOT RESPONSIBLE FOR SITE SAFETY PROCEDURES OR METHODS OF CONSTRUCTION. IT IS NOT LBYD'S DUTY TO REVIEW THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN OR NEAR HE CONSTRUCTION SITE.

2. ALL EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND OTHER UTILITIES MAY EXIST. CONTRACTOR MUST HAVE EXISTING UTILITIES LOCATED BY UNDERGROUND LINE LOCATORS AS WELL AS FIELD VERIFIED BY ONSITE PERSONNEL BY "POT HOLING" THE UTILITY WITH POST HOLE DIGGERS PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER IMMEDIATELY. . EXISTING UTILITIES TO REMAIN MAY BE LOCATED WITHIN PROPOSED

DEMOLITION AREAS. CONTRACTOR SHALL USE EXTREME CAUTION WHILE WORKING I THESE AREAS TO ENSURE NO UTILITY SERVICE INTERRUPTIONS TO FACILITIES THAT REMAIN OR TO ADJACENT PROPERTIES. 4. ALL EXISTING IMPROVEMENTS WITHIN THE LIMITS OF CONSTRUCTION ARE TO

REMAIN UNLESS SPECIFICALLY NOTED. "TO BE REMOVED". 5. CONTRACTOR SHALL COORDINATE WITH OWNER AND THE UTILITY PROVIDER PRIOR TO THE DISCONNECTING OR REMOVAL OF ANY UTILITY SERVICE. ALL UTILITIES TO BE REMOVED ARE TO BE CAPPED OR PLUGGED OR TERMINATED ACCORDING TO THE UTILITY OWNERS REQUIREMENTS. 5. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT

ADJACENT PROPERTIES AND IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING IMPROVEMENTS ON OR OFF SITE DUE TO THE CONSTRUCTION OF THIS PROJECT. ANY DAMAGE WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. WHEN CAVES OR SOLUTION CAVITIES ARE DISCOVERED DURING CONSTRUCTION, WORK SHALL STOP IN THE AREA PENDING FURTHER BIOLOGICAL

AND GEOTECHNICAL INVESTIGATIONS. 8. IF DURING CONSTRUCTION THE CONTRACTOR OBSERVES HISTORIC OR ARCHAEOLOGICAL RESOURCES, THEN SUCH OBSERVATIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER. THE CONTRACTOR SHALL CEASE ALL ACTIVITIES IN THE AREA THAT MAY RESULT IN THE DESTRUCTION OF THESE RESOURCES AND SHALL PREVENT EMPLOYEES FROM TRESPASSING ON, REMOVING, OR OTHERWISE

DAMAGING SUCH RESOURCES UNTIL RELEASED BY THE OWNER. 9. <u>MILITARY MUNITIONS</u> — BASED ON THE ENVIRONMENTAL ASSESSMENT THE FULL SITE HAS NOT BEEN IDENTIFIED AS HAVING THE POTENTIAL OF UNEXPLODED ORDINANCE (UXO). IN THE EVENT THAT THE CONTRACTOR DISCOVERS OR UNCOVERS MILITARY MUNITIONS AS DEFINED IN 40 CFR 260. HAZARDOUS WASTE MANAGEMENT SYSTEM HE SHALL STOP WORK IN THAT AREA AND NOTIFY THE OWNER

10.STORMWATER IMPACTS SHALL BE MINIMIZED DURING CONSTRUCTION WITH APPROPRIATE BMP MEASURES PER THE ALABAMA HANDBOOK FOR EROSION CONTROL. SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING A PLAN FOR SECONDARY CONTAINMENT OF STORED FUEL, DRIP PANS UNDER GENERATORS AND STATIONARY VEHICLES, AND MAINTAINING SPILL MITIGATION KITS ON-SITE DURING CONSTRUCTION. I WASTE MATERIALS SHALL BE RECYCLED TO THE MAXIMUM EXTENT FEASIBLE 12. FENCE REMOVAL AND INSTALLATION OPERATIONS SHALL BE ACCOMPLISHED SO THAT THE PERIMETER SECURITY OF THE EXISTING FACILITIES SHALL BE MAINTAINED AT ALL TIMES MEETING ANTI-TERRORISM/FORCE PROTECTION (AT/FP) REQUIREMENTS.

(AT/FF) NECONIMIENTS.

13. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
NOTE THAT NOT ALL SECTIONS OF THE CITY SPECIFICATIONS WILL APPLY TO 14. CONCRETE SHALL BE 3,000 PSI 28 DAY STRENGTH UNLESS OTHERWISE

15. EXISTING ROADWAYS SHALL BE KEPT FREE OF MUD, SEDIMENT, DEBRIS, ETC. AND SHALL BE CLEANED ON A REGULAR BASIS - AS A MINIMUM DAILY. THE CONTRACTOR SHALL BE RESPONSIBLE TO ADHERE TO THE REQUIREMENTS OF THE ENVIRONMENTAL ASSESSMENT FOR THE NORTH RIDEOUT ROAD ENHANCED USE LEASE SITE DEVELOPMENT AT REDSTONE ARSENAL, AL

DATED DECEMBER 2008. 17. SITE WORK IS CURRENTLY ONGOING AT THE SITE AND THE INFORMATION SHOWN ON SHEETS C2.0, C2.1, AND C2.2 REFLECT THE FINISHED CONDITION OF PACKAGE 1A - MASS GRADING AND EROSION CONTROL PACKAGE (UNSECURE AREA) "ISSUED FOR CONSTRUCTION" DATED DECEMBER 16, 2010 THE FLEVATIONS SHOWN ON THESE PLANS ARE TO FINISHED GRADE FLEVATION. E PACKAGE 1B-5 CONTRACTOR SHALL REVIEW THE PACKAGE 1A PLANS AND SPECIFICATIONS TO MAKE THEMSELVES FAMILIAR WITH THE PHASING OF PACKAGE 1A AND HOW IT WILL IMPACT THEIR PACKAGE 1B-5 SCOPE AND SCHEDULING OF WORK.

## SITE DEMOLITION NOTES:

. CONTRACTOR TO COORDINATE DEMOLITION ITEMS NOTED ON THE DRAWINGS TO BE SALVAGED, RECYCLED, AND REUSED, CONTRACTOR SHALL REMOVE THE CONCRETE AND STEEL POWER POLES TO BE SALVAGED WITH EXTREME CAUTION TO PREVENT DAMAGE AND STOCKPILE THEM IN AREA NOTED ON THE PLANS. REFER TO SITE GRADING, DRAINAGE, AND UTILITY PLANS FOR PROPOSED UTILITY AND DRAINAGE INSTALLATION AND REMOVAL.

REFER TO LAYOUT, GRADING, AND UTILITY PLANS FOR ADDITIONAL INFORMATION RELATING TO PAVING, CURB, SIDEWALKS, ETC. REMOVE EXISTING CURBS AS NEEDED TO INSTALL PROPOSED IMPROVEMENTS. 4. CONTRACTOR SHALL COORDINATE WITH CITY OF HUNTSVILLE (OWNER), REDSTONE ARSENAL, LBYD, THE PROJECT MANAGER, AND THE UTILITY PROVIDER

PRIOR TO THE DISCONNECTING OF ANY UTILITY SERVICE. 5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, RELOCATION OR PROTECTION OF ALL ABOVE AND BELOW GROUND EXISTING IMPROVEMENTS THAT ARE IN CONFLICT WITH THE PROPOSED IMPROVEMENTS UNLESS NOTED TO BE RELOCATED BY THE UTILITY SERVICE PROVIDER.

6. ALL DEMOLITION AND CONSTRUCTION DEBRIS SHALL BE RECYCLED TO THE MAXIMUM EXTENT FEASIBLE. REMAINING WASTE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE TRANSPORTED AND DISPOSED OF OFF-SITE AS REQUIRED IN A LEGAL MANNER WHILE KEEPING THE SITE CLEAN

AND ORDERLY. 7. ALL EXISTING PAVING, CURBS, HARDSCAPE, ETC. SHALL BE SAW CUT AT THE LIMITS OF REMOVAL IN ORDER TO PROVIDE A CLEAN EDGE. EXISTING PAVING AT EDGE SHALL BE MILLED BACK A MINIMUM OF 8" TO ENSURE SMOOTH

8. ALL EXISTING TREES TO REMAIN OUTSIDE OF THE CLEARING LIMITS SHALL BE PROTECTED DURING CONSTRUCTION. 9. BACKFILLING OF DEMOLISHED ITEMS SHALL BE SUITABLE FILL OR STONE PER THE PROJECT SPECIFICATIONS EARTHWORK IN THE SUPPLEMENT TO GENERAL

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND PUMPING AS NECESSARY FOR EROSION CONTROL FOR OWN SCOPE OF WORK

1. CONTRACTOR SHALL VERIFY SITE BOUNDARY AND EXISTING TOPOGRAPHY. NOTIFY THE OWNER OF ANY DISCREPANCIES PRIOR TO SUBMITTING PRICES OR 2. THE OWNER WILL BE RESPONSIBLE FOR PROVIDING BENCHMARKS, CONTROLS,

AND FINAL ELECTRONIC AS-BUILT DRAWINGS. 3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL BENCHMARKS AND PROPERTY CORNERS. ANY REPLACEMENT WILL BE AT THE CONTRACTOR'S 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING

AND A "RED-LINED" SET OF CLEAN CONSTRUCTION DOCUMENTS TO SERVE AS THE CONTRACTOR'S AS-BUILTS FOR OWN SCOPE OF WORK. 5. ALL DIMENSIONS AND COORDINATES SHOWN ARE TO THE OUTSIDE EDGE OF FUTURE BUILDINGS, TO THE BACK OF CURB, OR TO THE EDGE OF SURFACING UNLESS OTHERWISE NOTED.

6. ALL TEMPORARY STRIPING TO BE PER THE LATEST EDITION OF THE MUTCD UNLESS NOTED OTHERWISE. 7. ALL PERMANENT STRIPING SHALL BE THERMOPLASTIC PER CITY OF

HUNTSVILLE STANDARDS SPECIFICATION SECTION 701.

B. BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY THE OWNER AND PERFORMED BY BUSBIN ENGINEERING D. TOPOGRAPHIC INFORMATION WAS PERFORMED VIA GROUND RUN AND AERIAL FORMAT AND TAKEN FROM PREVIOUS DESIGN PLANS FOR PACKAGE 1A DATED

### TRAFFIC CONTROL NOTES:

1. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE LATEST EDITION AND REVISION OF PART VI OF THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE APPROVED TRAFFIC CONTROL PLAN FOR ALL CONSTRUCTION WITHIN WORK AREAS SHOWN AND DESCRIBED IN PART VI OF THE MUTCD. . ACCESS TO THE VISITOR'S CENTER SHALL BE MAINTAINED AT ALL TIMES AND SHALL MEET THE REQUIREMENTS OF REDSTONE ARSENAL . TRAFFIC CONTROL AND ACCESS SHALL TAKE INTO CONSIDERATION BASE SECURITY MEASURES.

PERMANENT ROADWAY SIGNS OR TEMPORARY CONSTRUCTION SIGNS WHICH ARE NOT APPLICABLE OR INAPPROPRIATE FOR THE CURRENT CONDITIONS SHALL 5. THE DIMENSIONS SHOWN OR DESCRIBED FOR LOCATING CONSTRUCTION SIGNS

ARE NOMINAL. THE ACTUAL DIMENSIONS SHALL BE ADJUSTED TO BEST FIT LOCAL CONDITIONS AND PROVIDE MAXIMUM VISIBILITY. 6. IF TRAFFIC CONTROL DEVICES ARE NECESSARY FOR PROPER WARNING AND TRAFFIC CONTROL AFTER SLINSFT. THEN AS A MINIMUM TYPE "B" WARNING LIGHTS SHALL BE PLACED ON THE FIRST WARNING SIGN AND CHANNELIZING DRUM AND TYPE "A" REFLECTIVE SHEETING SHALL BE REQUIRED ON ALL SIGNS. 7 HAZARDOUS CONDITIONS ON OPEN ROADWAYS SLICH AS PAVEMENT DROP-OFFS IN EXCESS OF 2"; CONSTRUCTION MATERIALS, VEHICLES, OR EQUIPMENT STORED OR PLACED WITHIN THE ROADWAY RIGHT-OF-WAY; AND OPEN TRENCHES ACROSS OR NEAR THE ROADWAY SHALL NOT BE ALLOWED UNLESS THE CONTRACTOR IS ON SITE AND WORKING, AND PROPER TRAFFIC CONTROL MEASURES ARE BEING TAKEN- INCLUDING BARRICADES. 8. THE CONTRACTOR SHALL KEEP OPEN ROADWAYS CLEAN AND FREE OF CONSTRUCTION DEBRIS. DIRT, LOOSE GRAVEL OR OTHER MATERIAL THAT MAY CAUSE HAZARDOUS DRIVING CONDITIONS. 9. TRAFFIC CONTROL DEVICES SHALL MEET THE STANDARD MATERIAL AND

INSTALLATION REQUIREMENTS SPECIFIED IN THE CURRENT EDITION OF THE AL.D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. 10. ROADWAYS AND DRIVEWAYS SHALL REMAIN OPEN DURING CONSTRUCTION. CHANNELIZING DEVICES SHALL BE PLACED AT 10' ON CENTER ALONG MINIMUM 20' RADII TO CHANNELIZE TRAFFIC INTO AND OUT OF INTERSECTING ROAD AND DRIVES WITHIN AREAS WHERE CHANNELIZING DEVICES ARE REQUIRED. TEMPORARY REGULATORY SIGNS SUCH AS STOP SIGNS AND YIELD SIGNS SHALL BE PLACED AS NECESSARY FOR PROPER TRAFFIC CONTROL IN ACCORDANCE WITH THE MUTCD.

11. CONTRACTOR SHALL UTILIZE FLAGMEN AND SIGNAGE AS NEEDED TO ASSURE

SAFE ACCESS TO AND FROM THE VISITOR'S CENTER. 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SITE CONSTRUCTION TRAFFIC CONTROL PLAN TO BE APPROVED BY THE CITY OF HUNTSVILLE AND REDSTONE ARSENAL PRIOR TO CONSTRUCTION. THE SITE CONSTRUCTION TRAFFIC CONTROL PLAN SHALL TAKE INTO ACCOUNT THE ENTERING AND EXITING OF CONSTRUCTION TRAFFIC ONTO THE ROADWAY AND THE IMPACT TO THE FLOW OF TRAFFIC. THIS PLAN SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD. THIS SITE CONSTRUCTION TRAFFIC CONTROL PLAN SHALL BE IN ADDITION TO ANY TRAFFIC LOGISTICS AND VISITOR CENTER ACCESS PLANS PROVIDED IN THIS PLAN SET FOR ROADWAY IMPROVEMENTS.

13. CONTRACTOR SHALL PHASE TRAFFIC CONTROL PLAN AS NEEDED TO ALLOW CONTINUOUS ACCESS TO THE EXISTING VISITOR CENTER AND AS NEEDED TO PROTECT THE WORKERS AND TRAVELING PUBLIC. 14. EXISTING ROADWAYS SHALL BE KEPT FREE OF MUD. SEDIMENT DEBRIS. ETC. AND SHALL BE CLEANED ON A REGULAR BASIS - AS A MINIMUM DAILY

PROJECT CONTROL POINTS (NE)

CONTROL: GTAC, PID DG5771

NAVD 88, USING 731.8 AS ELEVATION

GRID NORTH

GRID EAST

1,529,198.25 404,178.52 640.82

 AHD-16
 1,530,461.19
 404,038.30
 655.94

 AHD-17
 1,530,739.43
 403,720.37
 662.68

 TP-1
 1,528,778.40
 404,155.65
 638.64

NAV (83) CORS - 34'42'39.82619(N) - 086'39'12.28546(W)

ELEVATION

DESCRIPTION

ALDOT HIGHWAY MONUMENT NO. 17

MAG NAIL & GALVANIZED SHINER

LOCATION

I-565 R.O.W. 275' WEST OF CL RIDEOUT ROAD

177' NORTH OF CL GOSS ROAD & 113' WEST OF CL RIDEOUT ROAD

600' NORTH OF CL GOSS ROAD & 113' WEST OF CL RIDEOUT ROAD

#### REDSTONE TRANSMISSION LINE NOTES:

. THE CONTRACTOR SHALL NOTIFY REDSTONE ARSENAL, JERRY ROBINSON (256) 876-3122, AT LEAST 48 HOURS IN ADVANCE OF WORK NEAR REDSTONE TRANSMISSION LINES. 2. A CONDUCTOR TO GROUND CLEARANCE OF 24 FEET MUST BE MAINTAINED ON ALL FILLS. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE TO REDSTONE PROPERTY AND/OR ELECTRICAL OUTAGES CAUSED BY THEIR WORK 3. THE CONTRACTOR SHALL TAKE MEASURES TO ENSURE SAFETY OF THEIR WORKERS WHEN WORKING IN OR AROUND THE HIGH VOLTAGE TRANSMISSION LINES. THIS WORK SHALL BE PER STATE LAWS AND OSHA REQUIREMENTS FOR WORK NEAR ENERGIZED TRANSMISSION LINES. 4. ANY COUNTERPOISE THAT IS UNCOVERED OR DAMAGED SHALL BE REPAIRED/REBURIED IMMEDIATELY BY THE CONTRACTOR AT NO EXPENSE TO THE

5. REDSTONE HAS THE RIGHT FOR INGRESS AND EGRESS THROUGH THE CONSTRUCTION SITE FOR MAINTENANCE ON THEIR LINES. THE CONTRACTOR SHALL WORK WITH REDSTONE TO ENSURE ACCESS TO THEIR FACILITIES.

#### TVA TRANSMISSION LINE NOTES:

1. THE CONTRACTOR SHALL NOTIFY TVA, BENNY WESTMORELAND, AT (256) 851-3450 AT LEAST 48 HOURS IN ADVANCE OF WORK NEAR TVA TRANSMISSION

. A CONDUCTOR TO GROUND CLEARANCE OF 24 FEET MUST BE MAINTAINED ON ALL FILLS. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE TO TVA PROPERTY AND/OR ELECTRICAL OUTAGES CAUSED BY THEIR WORK. 3. THE CONTRACTOR SHALL TAKE MEASURES TO ENSURE SAFETY OF THEIR WORKERS WHEN WORKING IN OR AROUND THE HIGH VOLTAGE TRANSMISSION LINES. THIS WORK SHALL BE PER STATE LAWS AND OSHA REQUIREMENTS FOR WORK NEAR ENERGIZED TRANSMISSION LINES. 4. ANY COUNTERPOISE THAT IS UNCOVERED OR DAMAGED SHALL BE REPAIRED/REBURIED IMMEDIATELY BY THE CONTRACTOR AT NO EXPENSE TO THE

5. TVA HAS THE RIGHT FOR INGRESS AND EGRESS THROUGH THE CONSTRUCTION SITE FOR MAINTENANCE ON THEIR LINES. THE CONTRACTOR SHALL WORK WITH TVA TO ENSURE ACCESS TO THEIR FACILITIES.

#### EROSION CONTROL NOTES:

CONTRACTOR.

1. EXISTING EROSION CONTROL MEASURES INSTALLED IN PACKAGE 1A. CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THESE MEASURES LOCATED WITHIN THEIR WORK AREA ONLY. 2. ANY TEMPORARY ACCESS ROADS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR RELATED TO THEIR OWN SCOPE OF WORK.

3. SITE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS, CODES, AND REGULATIONS. 4. LW REDSTONE, LLC HAS OBTAINED A "NOTICE OF REGISTRATION" (NOR) FROM ADEM #ALR16EFJM (EXPIRES 8/23/2011). THE OWNER SHALL BE RESPONSIBLE FOR ALL ADEM REQUIRED MONITORING, INSPECTIONS, ETC. TO ENSURE THAT THE SITE IS AT ALL TIMES IN ACCORDANCE WITH ADEM RULES & REGULATIONS. DAILY DOCUMENTATION OF INSPECTIONS BY A Q.C.I. OR Q.C.P. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND MAINTAINED BY THE CONTRACTOR ON-SITE AND PROVIDED TO THE OWNER AT HIS/HER REQUEST. ANY AND ALL FEES, FINES, ETC., SHALL BE THE RESPONSIBILITY OF THE

5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING THE CONSTRUCTION PROCESS AND UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL EROSION CONTROL INSTALLATION AND MAINTENANCE SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT NO ADDITIONAL COST TO THE OWNER 6. FROSION CONTROL DEVICES SHOWN ON THESE PLANS ARE A MINIMUM. ADDITIONAL DEVICES SHALL BE INSTALLED AS REQUIRED TO PREVENT SILTATION, EROSION AND OTHER DEGRADATION OR POLLUTION TO THE SITE OR ADJACENT PROPERTIES, STREAMS, DITCHES, AND PUBLIC ROADWAYS. 7. EROSION CONTROL DEVICES SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING DEVICES: SILT FENCING, BRUSH BERMS, SEDIMENT BASINS, DETENTION PONDS, STRAW WATTLES, CHECK DAMS, FILTER BERMS, JUTE MATTING, VEGETATIVE FILTER STRIPS, TURF REINFORCEMENT MAT, DIVERSION BERMS, POLYACRYLAMIDE, FLOC BLOCKS, FTC

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES IN GOOD OPERATING CONDITION DURING ALL LAND DISTURBING ACTIVITIES. THIS RESPONSIBILITY SHALL INCLUDE THE CLEANUP AND/OR REPAIRS TO THE DEVICES AT NO ADDITIONAL COST TO THE OWNER. 9. ÉROSION CONTROL DEVICES SHALL BE MONITORED AND MAINTAINED UNTIL THE SITE HAS BEEN PERMANENTLY STABILIZED AND AFTER EACH RAINFALL GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD, ANY WIND GUSTS GREATER THAN 25 MPH, AND ANY SUSTAINED WINDS GREATER THAN 20 MPH IN A 24 HOUR PERIOD.

10. AFTER ALL LAND DISTURBANCE ACTIVITIES HAVE CEASED AND AFTER ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. THE FROSION CONTROL DEVICES SHALL BE REMOVED BY THE CONTRACTOR AND THE AREA CLEANED AND DRESSED FOR EACH CONTRACTOR'S WORK AREA. CONTRACTOR SHALL INSTALL, MAINTAIN, AND REMOVE ANY EROSION CONTROL MEASURES LINTIL AREA IS STABILIZED IN WORK AREA BY CONTRACTOR THAT INSTALLED THE

EROSION CONTROL MEASURE.

11. DEWATERING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR THEIR SCOPE OF WORK. DEWATERING OPERATIONS MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE OR POLLUTION TO ADJACENT PROPERTIES, STREAMS, DITCHES, OR PUBLIC ROADWAYS. 12. A GRAVELED ACCESS DRIVE SHALL BE AT EACH SITE ENTRANCE/EXIT TO PREVENT TRACKING OF DIRT AND SEDIMENT ONTO PUBLIC OR PRIVATE ROADWAYS. IF SEDIMENT REACHES THE ROADWAY, THEN IT MUST BE CLEANED

AT THE END OF EACH WORKDAY. . ALL LAND DISTURBANCE ACTIVITIES SHALL BE CONDUCTED IN A LOGICAL SEQUENCE TO MINIMIZE THE EXPOSURE OF BARE AREAS AT ANY ONE TIME. 14. ALL DISTURBED AREAS LEFT INACTIVE FOR MORE THAN 13 DAYS SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH ALDOT SPECIFICATIONS SECTION 652 AND 656 AND CITY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION

653 AND 659. 15. ALL GRADED AREAS SHALL RECEIVE A MINIMUM OF 4 INCHES OF TOPSOIL AND PERMANENT GRASSING UNLESS OTHERWISE INDICATED. . PRIOR TO SITE CLEARING, ALL PERIMETER SILT FENCING, BRUSH BERMS, ETC. AND GRAVELED ACCESS DRIVES SHALL BE INSTALLED. THE OWNER WILL INSPECT AND APPROVE THE INSTALLATION OF THESE MEASURES PRIOR TO RELEASING SITE WORK CONSTRUCTION.

17. ALL EXISTING STREAMS, DITCHES, ETC. SHALL BE PROTECTED FROM SEDIMENTS AND SILTS BY SILT FENCING, WATTLES, BRUSH BERMS, ETC. 18. WATTLES OR SILT FENCING SHALL BE INSTALLED AT ALL INLETS UPON THE COMPLETION OF EACH INLET AS INSTALLED. . RIP RAP SHALL BE PLACED AT EACH HEADWALL IMMEDIATELY FOLLOWING

CONSTRUCTION OF EACH HEADWALL. 20. GEOTEXTILE SHALL BE PLACED ON ALL 2:1 SIDE SLOPES. GEOTEXTILE SHALL BE NORTH AMERICAN GREEN SC150 OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS

21.GEOTEXTILE SHALL BE PLACED ON ALL 3:1 SIDE SLOPES. GEOTEXTILE SHALL BF NORTH AMERICAN GREEN S150 OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

22. GEOTEXTILE SHALL BE PLACED ON ALL DITCH BOTTOMS & TO THE TOP OF LOPE ON EACH SIDE. GEOTEXTILE SHALL BE NORTH AMERICAN GREEN SC150 OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. 23. GEOTEXTILE IS NOT REQUIRED ON 4:1 AND FLATTER SLOPES.

#### UTILITY NOTES:

1. CONTRACTOR TO COORDINATE WITH OWNER PRIOR TO ANY LITHLITY BEING DEMOLISHED REGARDING ITEMS TO BE SALVAGED, RECYCLED, AND REUSED. CONTRACTOR SHALL REMOVE ITEMS TO BE SALVAGED WITH EXTREME CAUTION TO PREVENT DAMAGE. CONTRACTOR SHALL TURN ALL SALVAGED UTILITY ITEMS OVER TO OWNER. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL GRAVITY SANITARY

SEWER MATERIALS TO THE OWNER AND RECEIVE APPROVAL PRIOR TO INSTALLATION AND/OR FABRICATION. 3. UTILITY TRENCHES SHALL BE BACKFILLED WITH COMPACTED FILL PLACED IN 3" LOOSE LIFTS. FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR AND

OPTIMUM MOISTURE CONTENT WITHIN ±2.0% PER CITY OF HUNTSVILLE STANDARD SPECIFICATIONS. WHEN INSTALLING LITHITIES IN EXISTING PAVED AREAS, ROADWAYS, OR IN AREAS WHERE SOILS ARE CONSIDERED UNSUITABLE FOR BEDDING OR BACKFILLING, UTILITY TRENCHES SHALL BE BACKFILLED FULL DEPTH WITH #78

STONE PER CITY OF HUNTSVILLE DR-166 THE OWNER SHALL BE RESPONSIBLE FOR PUMPING THE SEPTIC TANK AT THE VISITOR'S CENTER UNTIL THE NEW GRAVITY SEWER SYSTEM HAS BEEN INSTALLED. PUMPING SHALL CEASE ONCE THE SEWER LATERAL AND NEW GRAVITY MAIN HAS BEEN INSTALLED, TESTED, AND ACCEPTED BY THE OWNER. 6. REFER TO CITY OF HUNTSVILLE ENGINEERING DEPARTMENT DESIGN AND ACCEPTANCE MANUAL FOR SANITARY SEWERS DATED NOVEMBER 2005 FOR ALL GRAVITY SEWER MAINS.

#### **GRAVITY SANITARY SEWER NOTES:**

1. ALL GRAVITY SANITARY SEWER MAIN CONSTRUCTION SHALL BE PER THE CITY OF HUNTSVILLE ENGINEERING DEPARTMENT "DESIGN AND ACCEPTANCE MANUAL FOR SANITARY SEWERS" DATE NOVEMBER 2005. THE INTENT OF THE DRAWINGS IS THAT THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND TRANSPORTATION NECESSARY FOR THE PROPER EXECUTION OF THE WORK IN ACCORDANCE WITH THE

HE PROJECT IN AN ACCEPTABLE MANNER, READY FOR USE, OCCUPANCY OR OPERATION BY THE OWNER. OPERATION OF THE CONNECTS.

3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL GRAVITY SANITARY SEWER MATERIALS TO THE OWNER AND RECEIVE APPROVAL PRIOR TO INSTALLATION AND/OR FABRICATION.

CONTRACT DOCUMENTS AND ALL INCIDENTAL WORK NECESSARY TO COMPLETE

4. EFFORTS HAVE BEEN MADE TO INDICATE LOCATIONS OF EXISTING AND/OR PLANNED STRUCTURES, PIPING, UTILITIES, AND TOPOGRAPHY. HOWEVER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXACT MEASUREMENTS AND LOCATIONS OF ALL EXISTING ITEMS BEFORE INITIATING ANY CONSTRUCTION OPERATIONS. ANY EXISTING STRUCTURE, PIPING OR UTILITY DISTURBED OR DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION OPERATIONS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER AND/OR ENGINEER. SUFFICIENT ADVANCE COORDINATION OF DISRUPTION WITH THE OWNER OF ANY FACILITY IS THE TOTAL RESPONSIBILITY OF THE CONTRACTOR.

5. THE LIMITS OF CONSTRUCTION SHALL BE THE PROPERTY LINES OR EASEMENT LINES AS SHOWN ON THE PLANS. 6 FXISTING GRADING AND DRAINAGE ELEVATIONS SHALL BE MAINTAINED AFTER

CONSTRUCTION UNLESS OTHERWISE SHOWN ON PLANS. 7. ALL BURIED PIPES SHALL HAVE A MINIMUM OF 3'-0" COVER AS MEASURED VERTICALLY FROM FINISHED GRADE TO THE TOP OF PIPE. UNLESS OTHERWISE

8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO WORK ALL APPLICABLE DRAWINGS AND THE APPROPRIATE SPECIFICATIONS AS A UNIT. ANY OMISSIONS DELETIONS, OR CONFLICTS ARISING AS A RESULT OF FAILURE TO INCORPORATE ALL DRAWINGS AND SPECIFICATIONS THAT APPLY SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER AND/OR ENGINEER. 9 THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR TVL VACUUM TESTING MANHOLES AND AIR TESTING SEWER LINES. A 72-HOUR NOTICE IS REQUIRED PRIOR TO TESTING. REPRESENTATIVES FROM BOTH THE CITY ENGINEERING OFFICE AND WATER POLLUTION CONTROL SHALL BE PRESENT TO

VERIFY TESTING RESULTS. O. THE CONTRACTOR SHALL PROVIDE THE CITY ENGINEER WITH A COMPLETE SET OF RECORD DRAWINGS (AS-BUILTS) IN DIGITAL MICROSTATION (.DGN) AND HARDCOPY FORMAT, AND THE CONTRACTOR/INSPECTOR RED-LINED DRAWINGS UPON COMPLETION OF CONSTRUCTION. DRAWINGS SHALL BE REFERENCED TO ALABAMA STATE PLANE COORDINATE SYSTEM, NAD83 ALABAMA EAST ZONE AS DESCRIBED IN THE "CODE OF ALABAMA" (1975), SECTION 35-2-1. SURVEYS SHALL BE TIED TO A MINIMUM OF TWO ACCEPTED GPS MONUMENTS OR ONE GPS TIE POINT PLUS AN ASTRONOMIC OBSERVATION TO DETERMINE GRID NORTH. A LAND SURVEYOR LICENSED IN THE STATE OF ALABAMA SHALL COMPLETE THE SURVEY. IN ADDITION, THE RECORD DRAWINGS SHALL SHOW FINAL VERTICAL AND HORIZONTAL ALIGNMENT OF ALL BURIED UTILITIES ADDED OR MOVED AS A RESULT OF CONSTRUCTION. THEY SHALL INCLUDE ACTUAL FIELD ANGLES BETWEEN LINES, ALL SERVICE LINES AND TEE LOCATIONS, ALL VALVE VAULTS
AND VALVE BOXES, STUBOUTS, AND LINES, AND SHALL REFLECT ALL ALIGNMENT AND GRADE CHANGES FROM THE DESIGN DRAWINGS MADE DURING CONSTRUCTION. RECORD DRAWINGS MUST BE COMPLETED AND SUBMITTED PRIOR TO ACCEPTANCE OF THE SEWERS INTO THE PUBLIC SYSTEM AND ANY CONNECTIONS BEING MADE THERETO.

1. THE ENGINEER WILL PROVIDE GEOTECHNICAL INFORMATION SUCH AS BORINGS, SOIL TESTS, ETC UPON WRITTEN REQUEST. 12. ALL CONCRETE, ASPHALT DRIVEWAYS AND OTHER ROAD ACCESSES, SHALL BE SAWCUT AND REPAIRED IN AS GOOD OR BETTER CONDITION AS BEFORE CONSTRUCTION. PROPERTY OWNERS SHALL HAVE ACCESS TO PROPERTY AT ALL

TIMES DURING CONSTRUCTION. 13. CONTRACTOR SHALL SUPPLY AND INSTALL SERVICE CONNECTIONS AND FLEX CONNECTIONS IN MANHOLES AT ELEVATIONS AND DEFLECTIONS AS NOTED ON PLANS FOR ALL SERVICE LATERALS SHOWN.

14. SERVICE LATERALS AND STUBOUTS SHALL BE EXTENDED TO PROPERTY OR

EASEMENT LINES AS SHOWN ON PLANS. 15. SEED, FERTILIZE, AND MULCH ALL DISTURBED AREAS DURING

CONSTRUCTION.
16. FENCING MAY BE REMOVED FOR CONSTRUCTION PURPOSES ONLY. FENCES SHALL BE REINSTALLED IN THEIR ORIGINAL POSITIONS AND IN AS GOOD OR BETTER CONDITION AS BEFORE CONSTRUCTION WITH EXCEPTION OF FENCE ALONG INTERSTATE R.O.W. IN WHICH NO FENCE SHALL BE DISTURBED. 17. CONTRACTOR SHALL MAINTAIN A 15' MINIMUM EXCAVATION CLEARANCE AT ALL TRANSMISSION LINES TOWER SUPPORTS AND DOWN GUY ANCHORS. 18. CONTRACTOR SHALL COORDINATE IN ADVANCE AND DURING CONSTRUCTION DPERATIONS WITH THE OWNER OF ANY FIBER OPTIC COMMUNICATION CABLES IN THE AREAS WHERE THESE UTILITIES MAY EXIST. TRAFFIC CONTROL SHALL BE MAINTAINED PER THE "MANUAL ON UNIFORM

TRAFFIC CONTROL DEVICES", LATEST REVISION. 20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH NPDES STORMWATER PERMITS DURING ENTIRE CONSTRUCTING PERIOD. A COPY OF THE ADEM PERMIT SHALL MAINTAINED ON SITE AL ALL TIMES.

## UTILITY CONTACTS:

REDSTONE ARSENAL DIRECTORATE OF PUBLIC WORKS - POWER CONTACT: JERRY ROBINSON

PH: 256-876-3122 EMAIL: JERRY W ROBINSON@US ARMY MIL NEC - COMMUNICATIONS CONTACT: DAVID RUSSELL PH: 256-876-5030 EMAIL: DAVID.RUSSELL@US.ARMY.MIL CONTACT: JERRY HYATT PH: 256-876-2766 EMAIL: JERRY HYATT@US.ARMY.MIL CONTACT: GARY SHELTON PH: 256-876-5150 EMAIL: DONALD SHELTON@US ARMY MIL

PHONE COMPANIES CONTACT: ANDY WATWOOD, SR. FMAIL: ANDY WATWOOD@CENTURYLINK COM

CONTACT: STAN HODGES EMAIL: STAN.HODGES@KNOLOGY.COM

CONTACT: DEBORA GREGG EMAIL: DG5927@ATT.COM

UNTSVILLE UTILITIES POWER CONTACT: MIKE COUNTS PH: 256-535-1314 EMAIL: MIKE COUNTS@HSVUTIL ORG

CONTACT: RICHARD KNOX

PH: 256-535-1282

EMAIL: RKNOX@HSVUTIL.ORG CONTACT: JOEL PERRY PH: 256-535-1445 EMAIL: JOEL.PERRY@HSVUTIL.ORG

CONTACT: SAM MCELROY PH: 256-535-1314 EMAIL: SMCELROY@HSVUTIL.ORG

LBYD Civil and Structura Engineers Atlanta, Georgia Birmingham, Alabama Huntaville, Alabama

www.lbyd.com 302-10-002A LBYD, Inc.



03/14/20 HUNTSVILL

ш

**|** 

Ш

S

ARY

SANIT

GRAVITY 5  $\mathbf{\omega}$ <u>5</u> CKA ⋖ ERAL NOTES
GATEWAY DSTONE
OF HUNTSVII

03/14/2011

RAN BSJ

C1.0

